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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,995	02/20/2002	Jun Saito	1422-0519P	4521
2292	7590	05/08/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH			BOYER, CHARLES I	
PO BOX 747			ART UNIT	
FALLS CHURCH, VA 22040-0747			PAPER NUMBER	

1751

DATE MAILED: 05/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,995

Applicant(s)

SAITO ET AL.

Examiner

Charles I. Boyer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-13 and 15-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-13, and 15-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

This action is responsive to applicants' amendment and response received February 21, 2006. Claims 1-7, 9-13, and 15-19 are currently pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 9-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nitta et al, EP 936,269.

Nitta et al teach a process for preparing high density detergent compositions (see abstract). An example of such a process adds sodium carbonate and sodium tripolyphosphate to a mixer, followed by alkylbenzene sulfonic acid (note that here the liquid is added after the powder), and finally followed by an aqueous solution of acrylic acid-maleic acid copolymer (meets the liquid binder limitation of the claims) and zeolite with a particle size of 4 microns, yielding free-flowing granules with a bulk density of 760 g/L (page 13, example 1). Note that this process includes blowing a gas during the neutralization step (see page 23, table 5). Nitta et al teach that the liquids of the invention may be added at any step in the process depending on the composition of the granules desired (page 8, paragraph 60). Further, known substances generally

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employed in detergent compositions, such as aluminosilicates, may be added prior to the step of adding liquid components (page 8, paragraph 62). Nitta et al do not specifically teach the precise order of addition of powder and binder presently claimed to form granules.

First, it is well established in the art that there is only one way to form detergent agglomerates, that is, by mixing powders with liquid binders. Depending on the specific properties of the agglomerates desired, the person of skill in the art may modify the amounts of powder and binder added, the order of addition of these components, and the residence time of the resulting agglomerates in the mixer. For example, denser granules may require more binder and a longer residence time in the mixer. It is well known that too much binder may result in a sticky mass, and so the formulator will have to add more powder, or not enough binder will result in agglomerates that do not hold together, and so the formulator will have to add more binder. It is the examiner's contention that such modifications are well within the confidence level of one of ordinary skill in the art.

This argument is supported by Nitta et al when they teach that the liquids of the invention may be added at any step in the process depending on the composition of the granules desired, and known substances generally employed in detergent compositions, including powders, may be added at various stages along the process (see again paragraphs 60 and 62). In view of this teaching, and the examiner's assertion set forth above, it would have been obvious to one of ordinary skill in the art to

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add a liquid binder after the addition of a powder, subsequent to a neutralizing step, and so satisfy the present claim limitations.

Applicants have traversed this rejection on the grounds that only by their structured and precise timing can one advantageously control particle size in the inventive methods and thereby arrive at a high-bulk density detergent composition having a bulk density of 650 g/L or more. The examiner does not reject this argument out of hand, however, the examiner believes it is obvious to add liquid or powder as needed in order to form agglomerates. To use a very simplistic example, when one is mixing a batter for say, pancakes, it is very common to add more mix if the consistency is too runny, or to add more water or milk if the mix is too thick, according to the taste of the preparer. While the examiner is not equating making pancakes with forming detergent agglomerates, the examiner believes the principle of adding ingredients to achieve the desired physical properties of the final product is the same for both. Such additions would be the result of routine experimentation and are obvious to both the pancake and detergent maker. Applicants' own teaching appears to support the examiner's argument. In the first paragraph of page 19 of the specification, applicants state: "The method of adding the liquid binder may be carried out continuously or in a plurality of batches. It is preferable that the liquid binder is added to the neutralization mixture obtained in step (A) before or after the addition of the inorganic powder. By the addition of the liquid binder at this stage, the adhesiveness of the granular surface by the liquid binder can be reduced, whereby the granulation can be suppressed. In the process of the present invention, besides adding a part of or all of the optional

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ingredients in step (A), the optional ingredients can also be formulated in step (B)"

(emphasis added).

This disclosure appears to support the examiner's argument that the powders and binders used for forming agglomerates may be added any time the formulator desires, based on the desired properties of the final product. Applicants' teaching that the binder may be added either before or after the powder appears to teach away from the "strict addition requirements" in applicants' arguments. With respect to applicants' "advantageous particle size," the examiner notes that a particle size is not claimed. Furthermore, applicants' specification teaches a particle size of less than 700 microns, whereas Nitta et al teach preferred particle sizes of from 300 to 800 microns (page 12, paragraph 97).

3. Claims 1-7, 9-13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mort III et al, US 6,794,354.

Mort et al teach a continuous process for making a detergent composition (see abstract). This process begins with a neutralization step containing a liquid acid precursor and sodium carbonate as an alkaline inorganic material, followed by an intermediate step where optional liquid or particulate materials may be added, such as a zeolite free-flow aid. The final agglomeration step adds a liquid binder to the free-flowing powder obtained from the previous steps (col. 6, line 25-col. 7, line 35). An example of such a process results in detergent agglomerates having a bulk density of 680 g/L and a particle size of 550 microns (col. 15, example 1).

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Mort et al do not specifically teach the process of the present claims, however, when a zeolite free-flow aid is added in an intermediate step, after neutralization, and followed by a liquid binder in the agglomeration step, the claim limitations are satisfied. As such an order of addition is clearly contemplated by Mort et al, it would have been obvious to one of ordinary skill in the art to formulate such a composition with a reasonable expectation of successfully obtaining a detergent agglomerate.

Applicants' traversal of this rejection is the same as the one set forth above, and the examiner's response is the same.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles I. Boyer whose telephone number is 571 272 1311. The examiner can normally be reached on M-Th 9:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571 272 1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Charles I Boyer
Primary Examiner
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